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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,240	10/20/2003	Samay P. Kapoor	SC12850ZC	3940

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EXAMINER	
CHOE, HENRY	
ART UNIT	**PAPER NUMBER**
2817	

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/689,240	KAPOOR ET AL.	
	Examiner	Art Unit	
	Henry K Choe	2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,9-17,24-27 and 29* is/are rejected.

7)☒ Claim(s) *5-8,18-23 and 28* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Samay et al (Fig. 1).

Regarding claim 1, Samay et al (Fig. 1) discloses an amplifier circuit comprising an amplifier (Q1), a DC bias circuit (L7, R3, C7, C8, +V) comprising a decoupling capacitor (C8) having a first terminal (left terminal of C8) coupled to the output (drain terminal of Q1) of the amplifier (Q1) and to a voltage supply terminal (+V), and a low frequency decoupling capacitor (C7) coupled to the output (drain terminal of Q1) of the amplifier (Q1) at a location between the output (drain terminal of Q1) of the amplifier (Q1) and the first terminal (left terminal of C8) of the decoupling capacitor (C8).

Regarding claims 4 and 9, the capacitor C7 in Fig. 1 of Samay et al is functionally equivalent to the claimed tantalum capacitor and ceramic capacitor.

Claims 13, 16, 17 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Liu (Fig. 4).

Regarding claim 13, Liu (Fig. 4) discloses an amplifier circuit comprising an amplifier (6), a DC bias circuit (5a) including a transmission line (17) having a first end (bottom terminal of 17) coupled to the output (drain terminal of 6) of the amplifier (6) and

a second end (upper terminal of 17) and wherein a length of the transmission line 17 is ¼ wavelength (see column 7, lines 21-23), a decoupling capacitor (23) coupled to the second end (upper terminal of 17) of the transmission line (17), and a low frequency decoupling capacitor (21) coupled to the output (drain terminal of 6) of the amplifier (6) at a location between the output (drain terminal of 6) of the amplifier (6) and the decoupling capacitor (23).

Regarding claims 16 and 17, the capacitor 21 in Fig. 4 of Liu is functionally equivalent to the claimed tantalum capacitor and ceramic capacitor.

Regarding claim 24, Liu (Fig. 4) discloses an amplifier circuit comprising an input matching circuit (7), an amplifier (6), an output matching circuit (5a, 8) and wherein the output matching circuit (5a, 8) includes an output signal path (8) and a DC bias feed path (5a) and wherein the a DC bias feed path (5a) includes a transmission line (17) having a first end (bottom terminal of 17) coupled to the output (drain terminal of 6) of the amplifier (6) and a second end (upper terminal of 17) and wherein a length of the transmission line 17 is ¼ wavelength (see column 7, lines 21-23), a decoupling capacitor (23) having a first terminal (left terminal of 23) coupled to the second end (upper terminal of 17) of the transmission line (17), and a low frequency decoupling capacitor (21) coupled to the output (drain terminal of 6) of the amplifier (6) at a location between the output (drain terminal of 6) of the amplifier (6) and the first terminal (left terminal of 23) of the decoupling capacitor (23).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2, 3, 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Samay et al (Fig. 1).

Samay et al (Fig. 1) discloses all the limitations in the claims except for that the low frequency decoupling capacitor has a self resonant frequency lower than that of the decoupling capacitor, the low frequency decoupling capacitor has a self resonant frequency that is no higher than one tenth of that of the decoupling capacitor, the decoupling capacitor has a self resonant frequency equal to the carrier frequency, and the carrier frequency is in a range of 100 MHZ to 4 GHz. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have implemented the specific values of the capacitors, since they are based on the routine experimentation to obtain the optimum operating parameters.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yip (Fig. 1) in view of Samay et al (Fig. 1).

Yip (Fig. 1) discloses an amplifier circuit comprising a mixer (20) having an output (output of 20) which is coupled to an input terminal (input of 24) of the circuit (24). As described above, Yip (Fig. 1) discloses all the limitations in the claim 11 except for that the detail structures of the circuit. Samay et al (Fig. 1) discloses the detail structures of the circuit as described in the above rejection (see claim 1 rejection). It would have been obvious to substitute Samay et al's circuit [Amplifier Module of Samay et al (Fig. 1)] in place of Yip's circuit (24 of Yip) since Yip (Fig. 1) discloses a generic circuit amplifier (24) thereby suggesting that any equivalent circuit of power amplifier would have been usable in Yip's reference.

Claims 14, 15, 27 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu (Fig. 4).

Liu (Fig. 4) discloses all the limitations in the claims except for that the low frequency decoupling capacitor has a self resonant frequency lower than that of the decoupling capacitor, the low frequency decoupling capacitor has a self resonant frequency that is no higher than one tenth of that of the decoupling capacitor, the low frequency decoupling capacitor is characterized has having a self resonant frequency that is no more than one tenth a frequency of the carrier frequency, and the carrier frequency is in a range of 100 MHZ to 4 GHz. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have implemented the specific values of the capacitors, since they are based on the routine experimentation to obtain the optimum operating parameters.

Allowable Subject Matter

Claims 5-8, 18-23 and 28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Patent numbers (6,163,222; 5,329,249) are the amplifier circuits with the matching circuits.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Henry Choe whose telephone number is (571) 272-1760.

HENRY CHOE
PRIMARY EXAMINER

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